

ALLOYED STEEL POWDER WITH IMPROVED DEGREE OF SINTERING FOR
METAL INJECTION MOLDING AND SINTERED BODY

ABSTRACT

An alloyed steel powder for metal injection molding that eliminates the problems of decreased product strength and difficulty of temperature control which exist in conventional alloys for sintering and that improves productivity of the sintering furnace is provided, together with a sintered body thereof.

—This ~~is an~~ alloyed steel powder for metal injection molding ~~which consists,~~ as mass percentages, of 0.1 to 1.8% C, 0.3 to 1.2% Si, 0.1 to 0.5% Mn, 11 to 18% Cr, 2 to 5% Nb and the remainder Fe and unavoidable impurities, and which may further comprise 5.0% or less of at least one of Mo, V and W, or a sintered body (wherein C is 0.1 to 1.7%) of these powders.

—~~As shown in Figures 6 through 9, the~~ The alloyed steel powder for metal injection molding of the present invention results in a sintered body with a constant sintered density over a 50°C range of sintering temperatures, thereby facilitating sintering temperature control and improving productivity.